

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent Application

Applicants: M.A.K. Alicherry et al.
Case: 6-3
Serial No.: 10/722,651
Filing Date: November 26, 2003
Group: 2128
Examiner: David Silver

Title: Methods and Apparatus for
Line System Design

REPLY BRIEF

Commissioner for Patents
P.O. Box 1450
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Sir:

The remarks which follow are submitted in response to the Examiner's Answer dated June 8, 2009 in the above-identified application. The arguments presented by Appellants in the corresponding Appeal Brief dated January 23, 2009, are hereby incorporated by reference herein.

As a preliminary matter, Appellants gratefully acknowledge the withdrawal of the §101 rejection of all claims and the §102 rejection of claim 29. However, Applicants respectfully submit that claim 29 should be indicated as allowed, as both the §101 and the §102 rejections of claim 29 have been withdrawn.

In the Examiner's Answer at pages 5-8, the Examiner responds to various arguments raised by Appellants in the Appeal Brief.

In the Answer at Section 10.6.1 on page 6, the Examiner again characterizes the limitations of claim 1 which recite (emphasis in original) "obtaining a set of one or more demands *for use in*

computing the line system design,” and “representing the line system design as a graph in accordance with a graph coloring operation wherein . . . the one or more demands are routed *so as to attempt to achieve a minimum total design cost,”* as being drawn to intended use and hence not given patentable weight. Appellants maintain that these claims should be afforded patentable weight for the reasons identified in the Appeal Brief.

In the Answer at Section 10.6.3 at page 6, the Examiner argues that “even if patentable weight was afforded to the non-limiting claim language, the features are taught by the reference.” Appellants note that the limitation at issue is directed to representing a line system design as a graph in accordance with a graph coloring operation wherein colors represent bandwidths such that bandwidths are assigned and the one or more demands are routed so as to attempt to achieve a minimum total design cost.

The Examiner argues that “the limitation of assigning colors representing bandwidths” is disclosed by Arquie at paragraph [0013], which discusses “adding color . . . such that particular performance ranges are essentially color-coded,” and that “[t]he minimization of costs is implied in” paragraph [0060] of Arquie, which indicates “the use of utilization rate as the displayed performance information for connections was selected because it allows network administrators to rapidly and effectively identify which connections (or switches or other components) are being saturated or over utilized or are being underutilized.”

Appellants respectfully maintain that Arquie mentions nothing about colors representing bandwidths such that bandwidths are assigned and the one or more demands are routed so as to attempt to achieve a minimum total design cost. Indeed, Arquie does not perform any assignment of bandwidths, routing of demands, or design of a network (much less minimization of a total design cost). Rather, Arquie is directed to a technique in which a color-coded visualization “allows network administrators to rapidly and effectively identify which connections” are being inefficiently utilized in a network. In the technique taught by Arquie, any assignment of bandwidths, routing of demands, or minimization of a total design cost would be performed by a network administrator rather than by a computer, as recited in claim 1.

As such, Arquie fails to meet the limitations of independent claim 1, each of which is entitled to patentable weight. The other independent claims are similarly patentable over Arquie.

With regard to Section 10.8.1 on pages 7-8 of the Answer, Appellants note that claims 2 and 16 include limitations wherein colors are partitioned in sets and the sets are ordered so that colors in higher sets cost more than colors in lower sets. Appellants again submit that Arquie does not describe partitioning colors into sets of colors. Rather, Arquie describes an arrangement in which “a different [single] color is assigned to each of the performance ranges.” See Arquie at paragraph [0052]; see also Arquie at paragraphs [0013] and [0016], as well as claims 13 and 20.

Moreover, Arquie fails to teach an arrangement wherein sets are ordered so that colors in higher sets cost more than colors in lower sets. Indeed, there is no teaching or suggestion in Arquie that a color is associated with a cost, much less that sets of colors are ordered according to their costs. Rather, as noted above, Arquie discloses an arrangement in which “a different color is assigned to each of the performance ranges.” It is important to note that there is no teaching or suggestion in Arquie that these performance ranges are in any way associated with respective costs.

With regard to Section 10.8.3.1 on page 8 of the Answer, Appellants note that claims 5 and 19 include limitations wherein colors are assigned to the demands such that no two demands routed on the same link of the graph are assigned the same color. The Examiner relies on “Fig. 4, item 435 and 434 which demonstrate that the utilization of bandwidth in 434 is non-existent within that link, but indeed exists within 435. Therefore, this shows a link such that the two demands (equivalent to the bandwidth) are not the same color.”

Even assuming arguendo that items 434 and 435 in FIG. 4 represent one instance in which demands routed on the same link of the graph are not assigned the same color, Appellants note that FIG. 4 also shows that the link identified in FIG. 3 with reference numeral 338 has two channels (438 and 439) which are assigned the same color. See Arquie at paragraph [0047] (“Connection 438 is shown with data flowing to switch 432 at a utilization rate of 40 to 60 percent while data is flowing away from switch 432 in connection 439 at a utilization rate of 40 to 60 percent.”) Thus, the arrangement shown in FIG. 4 of Arquie fails to meet the limitation at issue wherein colors are assigned to the demands such that no two demands routed on the same link of the graph are assigned the same color. As discussed in the Appeal Brief, FIGS. 5 and 7 of Arquie are similarly deficient.

In view of the above, Appellants respectfully submit that claims 1-9 and 11-29 are in condition for allowance, and respectfully request the reversal of the §102 rejection.

Respectfully submitted,

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